

**Translation**

Rec'd PCT/PTO

24 FEB 2005

PATENT COOPERATION TREATY

PCT/JP2003/010882



**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

|  |  |  |                       |
|--|--|--|-----------------------|
| Applicant's or agent's file reference<br><b>PCT-144</b>  | <b>FOR FURTHER ACTION</b>  |  | See Form PCT/IPEA/416 |
| International application No.<br><b>PCT/JP2003/010882</b>  | International filing date (day/month/year)<br><b>27 August 2003 (27.08.2003)</b> | Priority date (day/month/year)<br><b>29 August 2002 (29.08.2002)</b> |                       |
| International Patent Classification (IPC) or national classification and IPC<br><b>A61N 1/40</b> |  |  |                       |
| Applicant<br><b>NIPPON SHEET GLASS COMPANY LIMITED</b>   |  |  |                       |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of \_\_\_\_\_ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) \_\_\_\_\_, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

|   |   |
|---|---|
| <input checked="" type="checkbox"/> Box No. I | Basis of the report   |
| <input type="checkbox"/> Box No. II           | Priority  |
| <input type="checkbox"/> Box No. III          | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/> Box No. IV           | Lack of unity of invention  |
| <input checked="" type="checkbox"/> Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> Box No. VI           | Certain documents cited   |
| <input type="checkbox"/> Box No. VII          | Certain defects in the international application  |
| <input type="checkbox"/> Box No. VIII         | Certain observations on the international application   |

|  |  |
|--|--|
| Date of submission of the demand<br><b>02 February 2004 (02.02.2004)</b> | Date of completion of this report<br><b>28 September 2004 (28.09.2004)</b> |
| Name and mailing address of the IPEA/JP                                  | Authorized officer   |
| Facsimile No.  | Telephone No.  |

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

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## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_, as amended (together with any statement) under Article 19
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_, as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

|                               |        |      |     |
|-------------------------------|--------|------|-----|
| Novelty (N)                   | Claims | 1-19 | YES |
|                               | Claims |      | NO  |
| Inventive step (IS)           | Claims |      | YES |
|                               | Claims | 1-19 | NO  |
| Industrial applicability (IA) | Claims | 1-19 | YES |
|                               | Claims |      | NO  |

**2. Citations and explanations**

Document 1: JP 6-245993 A (Tomoya Sato, 3 others), 6 September 1994

Document 2: JP 8-119635 A (Toda Kogyo Kabushiki Kaisha), 14 May 1996

Document 3: WO 99/33597 A1 (Nichia Chemical Industries, Ltd.), 8 July 1999

Document 4: JP 11-191509 A (JSR Corp.), 13 July 1999

Claims 1 to 9, 13, 14

Document 1 discloses a magnetic composition used in hyperthermia.

Document 2 discloses the manufacture of granular magnetite fine particles using a granular goethite fine particle powder containing a silicon compound for precursor particles.

A person skilled in the art could easily conceive of using the granular magnetite fine particles of the invention disclosed in document 2 as the magnetic composition of the invention disclosed in document 1.

Document 3 discloses the manufacture of a magnetic alloy powder having a single magnetic domain particle size and reduced cracking.

A person skilled in the art could easily conceive of adapting the invention disclosed in document 1 by applying

the invention disclosed in document 3, and manufacturing the magnetic composition as a magnetic alloy powder having a single magnetic domain particle size and reduced cracking.

Accordingly, a person skilled in the art could easily conceive of the invention described in claims 1 to 9, 13, and 14 in the light of the inventions disclosed in documents 1 to 3.

#### Claims 10 to 12

Document 4 discloses a feature wherein a metal oxide coating is formed on magnetic particles used as a drug delivery carrier.

A person skilled in the art could easily conceive of adapting the invention disclosed in document 1 by applying the invention disclosed in document 4, and forming a metal oxide coating on the magnetic composition.

Accordingly, a person skilled in the art could easily conceive of the invention described in claims 10 to 12 in the light of the inventions disclosed in documents 1 to 4.

#### Claims 15 to 19

Document 1 discloses the use of a magnetic composition in hyperthermia.

Document 2 discloses a method for manufacturing granular magnetite fine particles by using a suspension containing a granular goethite fine particle powder and colloidal ferrous hydroxide and forming magnetite from the granular goethite fine particle powder.

Document 3 discloses a feature wherein heating and a reduction process are performed in order to obtain a magnetic alloy powder having a single magnetic domain particle size.

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A person skilled in the art could easily conceive of adapting the process whereby magnetite is formed from the granular fine particle powder in the invention disclosed in document 2 by applying the feature wherein heating and a reduction process are performed in the invention disclosed in document 3.

A feature wherein a heating process is carried out by inserting nuclear fine particles in a cylindrical drum and rotating the drum during the process, as in the invention described in claim 19, is merely a feature fittingly performed by a person skilled in the art.

Accordingly, a person skilled in the art could easily conceive of the invention described in claims 15 to 19 in the light of the inventions disclosed in documents 1 to 3.